

BOOK REVIEW

THE SOIL RESOURCE: ORIGIN AND BEHAVIOUR, by H. Jenny, with pp. xx + 377 and 191 figures. ISBN 3-540-90543-X. Berlin, Heidelberg, New York: Springer-Verlag, 1980. Cloth DM 57, approx. US \$ 33,70.

In 1941, Dr. Hans Jenny published a classic work on soil genesis, entitled *Factors of soil formation*. His latest book is an expanded and revised version of his earlier work, the result of a lifetime of original, stimulating and sometimes controversial endeavour in this field. Processes relevant to soil formation and the interaction between soils and other components of the ecosystem are described and the role of climate, parent material, topography, time and biotic factors in shaping soil properties is emphasized.

The book is divided into two sections, processes of soil genesis and soil and ecosystem sequences. The first section covers soil physics, soil chemistry, plant nutrition, the genesis and transformation of soil constituents, and the development of horizons and profiles. His concepts are sometimes unconventional but valid, for example his classification of the components of soil water potential, and should be viewed as his own understanding and appreciation of soil processes.

The second half of the book covers soil genesis in relation to soil forming factors. Each factor is discussed in turn and examples of soil sequences in which all factors except one remain constant are discussed. The emphasis is on soil genesis, not classification. Various nomenclatures are used, but the U.S. Soil Taxonomy system predominates.

The theme throughout the book is soil in the ecosystem context. A large number of examples drawn from work published during the past century illustrate Jenny's concepts. Most of the examples originate in the United States, but there are many from other countries, including a description of a laterite from Zimbabwe.

The text is informal, descriptive and largely non-mathematical. S I units are not used. A large number of drawings and figures in Jenny's own hand, deliberately retained by the editors, adds a personal touch to the book. Less important sections, detailed descriptions and some examples are set in smaller type and may be omitted during a first reading. Each chapter has a summary.

Although the book is an expansion of Jenny's lecture notes, its broad compass and informal nature renders it most appealing to practising soil scientists and botanists. It is not suitable as an introductory text but should be stimulating to advanced students.

Dr. Jenny has produced a book that is extremely readable and thought-provoking, fine evidence of the range of interests, insight and approach of one of the world's leading soil scientists.

J. L. HUTSON